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Fax: (571) 273-8300	Date: July 30, 2007
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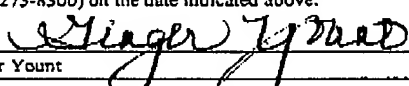
Applicant(s): JERRY L. MIZELL ET AL.
Serial No.: 09/609,913
Filing Date: July 3, 2000
Title: PACKET-SWITCHED COMMUNICATIONS IN A MOBILE NETWORK

1. Transmittal of Appeal Brief (in duplicate); and
2. Second Appeal Brief Pursuant to 37 C.F.R. § 41.37..


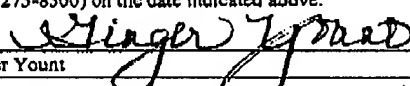
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TRANSMITTAL OF APPEAL BRIEF (Large Entity)					Docket No. NRT.0027US	
In Re Application Of: Jerry L. Mizell et al.						
Application No. 09/609,913	Filing Date 07-03-2000	Examiner Christine Y. Ng	Customer No. 21906	Group Art Unit 2616	Confirmation No. 3274	
Invention: Packet-Switched Communications in a Mobile Network						
<p style="text-align: center;"><u>COMMISSIONER FOR PATENTS:</u></p> <p>Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on: May 29, 2007.</p> <p>The fee for filing this Appeal Brief is: \$0.00 No fee is due (fee previously paid on 11-27-2006).</p> <p><input type="checkbox"/> A check in the amount of the fee is enclosed.</p> <p><input type="checkbox"/> The Director has already been authorized to charge fees in this application to a Deposit Account.</p> <p><input checked="" type="checkbox"/> The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. <u>20-1504 (NRT.0027US)</u> I have enclosed a duplicate copy of this sheet.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p>WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p> <div style="display: flex; justify-content: space-between; align-items: flex-end;"><div style="text-align: center;"> Signature</div><div style="text-align: right;">Dated: July 30, 2007</div></div> <div style="display: flex; justify-content: space-between; align-items: flex-end;"><div><p>Dan C. Hu Registration No. 40,025 TROP, PRUNER & HU, P.C. 1616 South Voss Road, Suite 750 Houston, TX 77057-2631 Telephone: (713) 468-8880, ext. 304 Facsimile: (713) 468-8883</p></div><div style="border: 1px solid black; padding: 5px; width: 300px;"><p>Date of Deposit: <u>July 30, 2007</u></p><p>I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent Office (Fax No. (571) 273-8300) on the date indicated above.</p><p style="text-align: center;"> Ginger Yount</p></div></div> <div style="margin-top: 10px;">cc:</div>						

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TRANSMITTAL OF APPEAL BRIEF (Large Entity)					Docket No. NRT.0027US	
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Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on: May 29, 2007.						
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<input checked="" type="checkbox"/> The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 20-1504 (NRT.0027US) I have enclosed a duplicate copy of this sheet.						
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Dan C. Hu Registration No. 40,025 TROP, PRUNER & HU, P.C. 1616 South Voss Road, Suite 750 Houston, TX 77057-2631 Telephone: (713) 468-8880, ext. 304 Facsimile: (713) 468-8883			<div style="border: 1px solid black; padding: 5px;"><div style="display: flex; justify-content: space-between;">Date of Deposit:<i>July 30, 2007</i></div><p style="font-size: small;">I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent Office (Fax No. (571) 273-8300) on the date indicated above.</p><div style="text-align: center;"> Ginger Yount</div></div>			
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Jerry L. Mizell et al.	§	Group Art Unit:	2616
Serial No.:	09/609,913	§		
Filed:	July 3, 2000	§	Examiner:	Christine Y. Ng
For:	Packet-Switched Communications In A Mobile Network	§	Atty. Dkt. No.:	NRT.0027US (11439RRUS02U)

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SECOND
APPEAL BRIEF PURSUANT TO 37 C.F.R § 41.37

Sir:

The rejection of claims 2, 3, 8-10, 19-21, 40-44, 46, and 49-51 is hereby appealed.

I. REAL PARTY IN INTEREST

The real party in interest is Nortel Networks Limited.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF THE CLAIMS

Claims 2, 3, 8-10, 19-21, 40-44, 46, and 49-51 have been twice rejected and are the subject of this appeal. Claims 1, 4-7, 11-18, 22-39, 45, 47, and 48 have been cancelled.

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IV. STATUS OF AMENDMENTS

No amendment after the 3/7/2007 Office Action has been submitted.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The following provides a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings by reference characters, as required by 37 C.F.R. § 41.37(c)(1)(v). Each element of the claims is identified by a corresponding reference to the specification and drawings where applicable. Note that the citation to passages in the specification and drawings for each claim element does not imply that the limitations from the specification and drawings should be read into the corresponding claim element.

Independent claim 2 recites a serving GPRS support node (SGSN) (Fig. 1:12) for use in a mobile communications network having a plurality of cell sites, comprising:

an interface adapted to communicate with a base station system in a cell site over a Gb network (Fig. 1:16; Fig. 2:16; Spec., 6:9-11); and

a controller (Fig. 19:810, 814) adapted to transmit and receive data through the interface over the Gb network with the base station system according to a connectionless, packet-based protocol (Spec., 4:31-5:6; 6:30-33),

wherein the interface includes a connectionless, packet-based protocol layer (Fig. 4:126; Fig. 6:148) to communicate packets with a connectionless, packet-based protocol layer in the base station system (Spec., 8:28-30; 9:7-13).

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Independent claim 19 recites a serving General Packet Radio Service (GPRS) support node (Fig. 1:12) for use in a mobile communications system having base station systems, comprising:

an interface to one or more networks (Fig. 1:16; Fig. 2:16) coupled to the base station systems, the interface comprising a packet-switched element (Fig. 4:126; Fig. 6:148) to manage communication over a network between the serving GPRS support node and at least one of the base station systems (Spec., 4:31-5:6; 6:30-33; 8:28-30; 9:7-13),

wherein the packet-switched element comprises an Internet Protocol element (Fig. 4:126; Fig. 6:148) to communicate packets with an Internet Protocol element in the at least one base station system (Spec., 5:11-18).

Independent claim 42 recites a system (Fig. 1:12) for use in a mobile communications network having a plurality of cell sites, comprising:

an interface adapted to communicate with a base station system in a cell site over a network (Fig. 1:16; Fig. 2:16; Spec., 6:9-11); and

a controller (Fig. 19: 810, 814) adapted to transmit and receive data through the interface over the network with the base station system according to a packet-switched protocol (Spec., 4:31-5:6; 6:30-33),

wherein the interface comprises a network layer (Fig. 4:126; Fig. 6:148) to manage communications of packets over the network, and a transport layer (Fig. 4:124; Fig. 6:146) to manage connections over the network (Spec., 8:28-30; 9:7-13),

wherein the controller comprises a network services layer (Fig. 4:122; Fig. 6:144) to transport packets through the transport and network layers (Spec., 8:28-30; 9:7-13),

wherein the network layer comprises an Internet Protocol layer (Fig. 4:126; Fig. 6:148) to communicate over a Gb network (Fig. 1:16; Fig. 2:16) with an Internet Protocol layer of the base station system (Spec., 4:31-5:6; 6:30-33).

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Independent claim 46 recites a node (Fig. 1:15) for use in a mobile communications network having a system controller, the node comprising:

one or more radio transceivers (Fig. 1:58) adapted to communicate with mobile stations (Spec., 6:33-7:4); and

a module (Fig. 19:800, 804) coupled to the one or more radio transceivers and adapted to communicate through a Gb interface with the system controller according to a packet-switched protocol (Spec., 4:31-5:6; 6:30-33; 16:1-3),

wherein the packet-switched protocol comprises a connectionless, packet-based protocol (Spec., 4:31-5:6).

Independent claim 50 recites a node (Fig. 1:15) for use in a mobile communications network having a system controller, the node comprising:

one or more radio transceivers (Fig. 1:58) adapted to communicate with mobile stations (Spec., 6:33-7:4);

a module (Fig. 19:800, 804) coupled to the one or more radio transceivers and adapted to communicate with the system controller (Spec., 4:31-5:6; 6:30-33); and

an Internet Protocol layer (Fig. 4:126; Fig. 6:148) to communicate over a Gb network with the system controller according to an Internet Protocol (Spec., 8:28-30; 9:7-13).

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Independent claim 51 recites a method of communicating in a mobile communications system having a base station system (Fig. 1:15), a system controller (Fig. 1:12), and an interface (Fig. 1:16; Fig. 2:16) between the base station system and the system controller, the method comprising:

transmitting and receiving data packets over the interface between the base station system and system controller according to a packet-switched protocol (Spec., 4:31-5:6; 6:30-33),

wherein transmitting and receiving data packets comprises an Internet Protocol layer in the system controller transmitting and receiving Internet Protocol packets over a Gb network with an Internet Protocol layer in the base station system (Fig. 4:126; Fig. 6:148; Spec., 5:11-18).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- A. Claims 2, 3, 8, 19, 20, 40-43, 46, And 49-51 Rejected Under 35 U.S.C. § 103 Over U.S. Patent No. 6,512,756 (Mustajarvi) In View Of U.S. Patent Application Publication No. 2002/0048268 (Menon).**
- B. Claims 9 And 10 Rejected Under 35 U.S.C. § 103 Over Mustajarvi In View Of Menon And U.S. Patent No. 6,763,007 (La Porta).**
- C. Claims 21 And 44 Rejected Under 35 U.S.C. § 103 Over Mustajarvi In View Of Menon And U.S. Patent No. 6,320,873 (Nevo).**

VII. ARGUMENT

The claims do not stand or fall together. Instead, Appellant presents separate arguments for various independent and dependent claims. Each of these arguments is separately argued below and presented with separate headings and sub-headings as required by 37 C.F.R. § 41.37(c)(1)(vii).

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A. Claims 2, 3, 8, 19, 20, 40-43, 46, And 49-51 Rejected Under 35 U.S.C. § 103 Over U.S. Patent No. 6,512,756 (Mustajarvi) In View Of U.S. Patent Application Publication No. 2002/0048268 (Menon).

1. Claims 2, 3, 8, 19, 20, 40-43, 49, and 51.

Independent claim 2 recites, *inter alia*, a serving GPRS support node (SGSN) that has an interface to communicate with a base station system in a cell site over a Gb network, and a controller to transmit and receive data through the interface over the Gb network with the base station system according to a connectionless, packet-based protocol.

Claim 2 was rejected as being obvious over Mustajarvi and Menon. It is respectfully submitted that a *prima facie* case of obviousness has not been established with respect to claim 2 for at least the reason that no reason existed that would have prompted a person of ordinary skill to combine the teachings of Mustajarvi and Menon to achieve the claimed invention. See *KSR International Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741, 82 U.S.P.Q.2d 1385 (2007).

Significantly, it is noted that Mustajarvi discloses a traditional GPRS network in which the Gb interface between the BSS and SGSN is a traditional **Frame Relay** interface, which is a connection-oriented interface, not a connectionless interface. As conceded by the Examiner, the Frame Relay-based Gb interface between the SGSN and BSS of Mustajarvi is different from the interface between the base station system and SGSN of claim 2, where the interface includes a connectionless, packet-based protocol layer to communicate packets with a connectionless, packet-based protocol layer in the base station system.

Although reference is made in Mustajarvi that communication between a *mobile station* and the SGSN can be accomplished using IP, that does not change the fact that the Gb interface between the BSS and the SGSN of Fig. 2 in Mustajarvi still remains a Frame Relay-based Gb interface.

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As purported addressing the shortcoming of Mustajarvi, the Examiner cited Menon, and in particular, Fig. 24 of Menon. Fig. 24 of Menon shows an IP layer in the BTS for communicating with an IP layer in an access router. Significantly, the interface between the BTS and the access router of Menon is not the interface between the BTS and an SGSN.

Menon describes two general embodiments, depicted in Figs. 1 and 5. In Fig. 1, a CPRU (customer premise radio unit) 25 communicates with a base station 30 over an air interface. In turn, the base station 30 communicates with a WARP (Wireless Adjunct InterNet Platform) 32, which is connected to an access router 35. In Fig. 5 of Menon, a CPRU is linked to the base station 101 over an air interface, and the base station 101 is linked to an access router. Although Menon does refer to GPRS, it is noted that Menon clearly does not contemplate the use of a Gb network. Instead, Menon teaches that GPRS can be used between the CPRU and a base station (*see, e.g.*, ¶¶ [0075], [0210], [0251], [0257], [0267], [0362], and [0392]). Menon clearly does not disclose or even remotely suggest that the interface between the WARP and access router (Fig. 1) or the base station and access router (Fig. 5) employs a GPRS-based network, such as the Gb network.

As disclosed in Fig. 24 of Menon, the interface between the BTS and the access router taught by Menon is clearly quite different from the Gb network recited in the claim. Fig. 24 of Menon shows the various layers of the BTS and access router. *See* Menon, ¶ [0292] (indicating that Fig. 24 shows the packet data signaling plane architecture 325 of the system 100 depicted in Fig. 5). There are no layers in Fig. 24 of Menon that would provide any hint that a Gb interface between the BTS and access router can be used. Moreover, it is noted that the arrangement of Menon is fundamentally different from mobile communications networks that employ Gb networks between base station systems and SGSNs. Although Menon teaches the use of wireless

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communication, the wireless communication is between a fixed location CPRU (see Fig. 1 of Menon) and a BTS. The CPRU (customer premise radio unit) is associated with a home or business premise, and the CPRU is connected to computing devices by "standard wireline cabling 41." Menon, ¶¶ [0065]-[0066]. Fig. 25 of Menon shows a physical connection between a PC and the CPRU that is a wireline interface. See Menon, ¶ [0308]. Additionally, Figs. 28-33 of Menon depict twisted pair connections (wireline connections) between phone/fax devices and the CPRU. Thus, fundamentally, the communication interfaces used in the overall architecture of Menon differ significantly from the interfaces used in mobile communications networks in which Gb interfaces are used, where terminal devices are mobile rather than connected by fixed wireline connections to a customer premise unit as in Menon.

Consequently, a person of ordinary skill in the art would not have been prompted to modify the access router and BTS of Menon to incorporate a *Gb interface*.

Ignoring the fundamental differences between the architecture of Menon from the architecture associated with a Gb interface, the Examiner concluded that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a connectionless, packet-based protocol layer in the base station system." 3/7/2007 Office Action at 3. The Examiner stated that "[o]ne would have been motivated to do so so that the base station can manage the IP functionality of the system, thereby load balancing the IP processing among different nodes." *Id.* at 3-4.

It is unclear how load balancing the IP processing among different nodes has anything to do with substituting the Frame Relay-based Gb interface of Mustajarvi with a connectionless protocol interface. In fact, the teachings of Menon would actually have led a person of ordinary skill in the art to use a network different from a GPRS-based network, such as the Gb network,

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between the WARP and access router or between the base station and access router. Specifically, the network between a WARP and access router or between a base station and access router in Menon is not a GPRS-based network, a point recognized by the Examiner. In ¶ [0081], Menon teaches that bearer voice messages are transmitted between a CPRU and a WARP using GSM/GPRS protocols. Significantly, this paragraph of Menon also states that the WARP "interworks the GSM/GPRS bearer voice messages to VoIP (voice IP) based messages for transmission toward the network, i.e., towards switched circuit network 50." There is no indication whatsoever that the link between the WARP and the access router or the link between the base station and the access router is a GPRS-based interface. In fact, Fig. 21 of Menon shows the protocol layers between the WARP and an SMP – there are no layers for a Gb interface in Fig. 21. As noted above, Fig. 24 of Menon shows the interface between a base station and an access router – again, there are no layers that correspond to a Gb interface. Fig. 25 shows the interface between a WARP and access router; similarly, there are no layers corresponding to a Gb interface in Fig. 25. Thus, it is clear that Menon would have suggested a different type of interface (that is, a non-GPRS based interface) between the access router and the WARP or base station.

It is clear that the Examiner has engaged in using impermissible hindsight to piece together elements of un-related references, in this case Mustajarvi and Menon. As held by *In re Fine*, "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). Here, the teachings of Mustajarvi and Menon are clearly disparate, with one proposing a non-Gb based network between a BTS and an access router,

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while the other teaches use of a Frame Relay-based Gb interface, rather than an interface that is based on a connectionless, packet-based protocol.

A person of ordinary skill in the art looking to the teachings of Mustajarvi and Menon would have been taught one of two things: (1) an IP interface over a *non*-Gb network can be provided between a base station or WARP and an access router; or (2) a *Frame Relay Gb* network can be used between a base station and an SGSN. This person of ordinary skill in the art would not have been prompted to modify the teachings of either Mustajarvi or Menon to achieve a Gb network that is according to a connectionless, packet-based protocol. Therefore, in view of the foregoing, it is respectfully submitted that there existed no reason to combine Mustajarvi and Menon in the manner proposed by the Examiner, and that therefore a *prima facie* case of obviousness cannot be established with respect to claim 2 (and its dependent claims).

Independent claims 19, 42, and 51 (and their dependent claims) are similarly allowable over the asserted combination of Mustajarvi and Menon.

In view of the foregoing, reversal of the rejection of the above claims is respectfully requested.

2. Claims 46 and 50.

Independent claim 46 was also rejected as being obvious over Mustajarvi and Menon.

Claim 46 recites a node for use in a mobile communications network having a system controller, where the node comprises one or more radio transceivers adapted to communicate with mobile stations, and a module coupled to the one or more radio transceivers and adapted to communicate through a Gb interface with the system controller according to a packet-switched protocol, where the packet-switched protocol comprises a connectionless, packet-based protocol.

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As discussed above, the conventional BSS disclosed in Mustajarvi has a Frame Relay layer to provide a Frame Relay-based Gb interface, as depicted in Fig. 2 of Mustajarvi. This is contrasted with the recitation in claim 46 that the node has a module coupled to the one or more radio transceivers and adapted to communicate through a Gb interface with the system controller *according to a packet-switched protocol*.

As discussed above in connection with claim 2, Menon does not provide the requisite teaching that would have supplied the reason to modify Mustajarvi to achieve the claimed invention. Therefore, a *prima facie* case of obviousness has not been established with respect to claim 46.

Independent claim 50 is similarly allowable over Mustajarvi and Menon.

Reversal of the rejection of the above claims is respectfully requested.

B. Claims 9 And 10 Rejected Under 35 U.S.C. § 103 Over Menon In View Of Mustajarvi And U.S. Patent No. 6,763,007 (La Porta).

1. Claims 9 and 10.

In view of the allowability of base claim 46 over Mustajarvi and Menon, it is respectfully submitted that the obviousness rejection of claims 9 and 10 over Mustajarvi, Menon, and La Porta has also been overcome. Therefore, reversal of the rejection of the above claims is respectfully requested.

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C. Claims 21 And 44 Rejected Under 35 U.S.C. § 103 Over Mustajarvi In View Of Menon And U.S. Patent No. 6,320,873 (Nevo).

1. Claims 21 and 44.

In view of the allowability of base claims 19 and 42 over Mustajarvi and Menon, it is respectfully submitted that the obviousness rejection of dependent claims 21 and 44 over Mustajarvi, Menon, and Nevo is also defective.

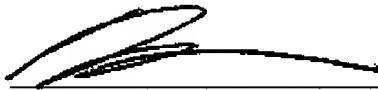
Reversal of the rejection of the above claims is respectfully requested.

VIII. CONCLUSION

In view of the foregoing, reversal of all rejections and allowance of all pending claims is respectfully requested.

Respectfully submitted,

Date: Jul 30, 2007



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APPENDIX OF APPEALED CLAIMS

The claims on appeal are:

1 2. A serving GPRS support node (SGSN) for use in a mobile communications
2 network having a plurality of cell sites, comprising:
3 an interface adapted to communicate with a base station system in a cell site over
4 a Gb network; and
5 a controller adapted to transmit and receive data through the interface over the Gb
6 network with the base station system according to a connectionless, packet-based protocol,
7 wherein the interface includes a connectionless, packet-based protocol layer to
8 communicate packets with a connectionless, packet-based protocol layer in the base station
9 system.

1 3. The SGSN of claim 2, wherein the connectionless, packet-based protocol
2 comprises an Internet Protocol.

1 8. The node of claim 46, wherein the packet-switched protocol comprises an Internet
2 Protocol.

1 9. The node of claim 46, wherein the module is adapted to communicate data
2 packets, each packet containing addresses identifying the node and the system controller.

1 10. The node of claim 9, wherein each packet contains Internet Protocol addresses.

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1 19. A serving General Packet Radio Service (GPRS) support node for use in a mobile
2 communications system having base station systems, comprising:

3 an interface to one or more networks coupled to the base station systems, the
4 interface comprising a packet-switched element to manage communication over a network
5 between the serving GPRS support node and at least one of the base station systems,

6 wherein the packet-switched element comprises an Internet Protocol element to
7 communicate packets with an Internet Protocol element in the at least one base station system.

1 20. The serving General Packet Radio Service support node of claim 19, further
2 comprising a User Datagram Protocol transport component to manage connections over the
3 network.

1 21. The serving General Packet Radio Service support node of claim 19, further
2 comprising a network services layer to transport data units containing signaling and bearer traffic
3 over the network.

1 40. The SGSN of claim 2, wherein the connectionless, packet-based protocol layer of
2 the interface comprises a network layer, and the interface further comprises a transport layer to
3 manage connections over the network.

1 41. The SGSN of claim 40, wherein the controller comprises a network services layer
2 to transport packets through the transport and network layers.

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1 42. A system for use in a mobile communications network having a plurality of cell
2 sites, comprising:
3 an interface adapted to communicate with a base station system in a cell site over
4 a network; and
5 a controller adapted to transmit and receive data through the interface over the
6 network with the base station system according to a packet-switched protocol,
7 wherein the interface comprises a network layer to manage communications of
8 packets over the network, and a transport layer to manage connections over the network,
9 wherein the controller comprises a network services layer to transport packets
10 through the transport and network layers,
11 wherein the network layer comprises an Internet Protocol layer to communicate
12 over a Gb network with an Internet Protocol layer of the base station system.

1 43. The system of claim 42, wherein the transport layer comprises a User Datagram
2 Protocol layer.

1 44. The system of claim 43, wherein the network services layer comprises a General
2 Packet Radio Service network services layer.

1 46. A node for use in a mobile communications network having a system controller,
2 the node comprising:
3 one or more radio transceivers adapted to communicate with mobile stations; and
4 a module coupled to the one or more radio transceivers and adapted to
5 communicate through a Gb interface with the system controller according to a packet-switched
6 protocol,
7 wherein the packet-switched protocol comprises a connectionless, packet-based
8 protocol.

1 49. The serving General Packet Radio Service support node of claim 19, wherein the
2 Internet Protocol element is adapted to communicate Internet Protocol packets to the Internet
3 Protocol element in the at least one base station system over a Gb interface.

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1 50. A node for use in a mobile communications network having a system controller,
2 the node comprising:
3 one or more radio transceivers adapted to communicate with mobile stations;
4 a module coupled to the one or more radio transceivers and adapted to
5 communicate with the system controller; and
6 an Internet Protocol layer to communicate over a Gb network with the system
7 controller according to an Internet Protocol.

1 51. A method of communicating in a mobile communications system having a base
2 station system, a system controller, and an interface between the base station system and the
3 system controller, the method comprising:
4 transmitting and receiving data packets over the interface between the base station
5 system and system controller according to a packet-switched protocol,
6 wherein transmitting and receiving data packets comprises an Internet Protocol
7 layer in the system controller transmitting and receiving Internet Protocol packets over a Gb
8 network with an Internet Protocol layer in the base station system.

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EVIDENCE APPENDIX

None.

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RELATED PROCEEDINGS APPENDIX

None.